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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,206	03/23/2004	Takeshi Takahashi	119201	1908
25944 7590 03/18/2009 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER				
HODGE, ROBERT W				
ART UNIT		PAPER NUMBER		
1795				
MAIL DATE		DELIVERY MODE		
03/18/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/806,206

**Applicant(s)**

TAKAHASHI ET AL.

**Examiner**

ROBERT HODGE

**Art Unit**

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2 and 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-893)  
Paper No(s)/Mail Date 12/31/08
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Arguments***

Applicant's arguments, see Remarks, filed 1/28/09, with respect to the rejection(s) of claim(s) 2 and 17 under 35 U.S.C. 102(b)/103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of JP 04-319260 & JP 09-147916.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 2 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 04-319260 hereinafter Watanabe in view of JP 09-147916 Inoue.

As discussed in the instant specification background section and verified through an oral translation Watanabe teaches a positive electrode active material for a nonaqueous electrolyte secondary battery comprising  $\text{LiCoO}_2$  that is covered with  $\text{Li}_2\text{ZrO}_3$  which provides a stable positive electrode. As a result, a positive electrode active material exhibiting excellent cycle characteristics and storage characteristics can be obtained without causing a decomposition reaction of an electrolytic solution or crystal destruction even at high potentials (abstract and instant specification page 2, second paragraph).

Watanabe does not teach magnesium oxide on the surface of the lithium cobaltate.

Inoue teaches a spirally wound nonaqueous electrolyte secondary battery comprising a strip positive electrode having a positive electrode current collector, a positive active material layer comprising  $\text{LiCoO}_2$  that is covered with a protective layer such as  $\text{MgO}$ , which achieves high voltages and high cyclability. Inoue further teaches a strip negative electrode having a negative electrode current collector and a negative active material is a carbon compound or a compound that is capable of intercalating and deintercalating lithium ions and a strip separator between and laminated with the positive and negative electrodes (Abstract, paragraphs [0004]-[0014], [0036] and [0060]).

At the time of the invention it would have been obvious to one having ordinary skill in the art to provide a layer comprising magnesium oxide on the positive active material layer of Watanabe as taught by Inoue in order to provide a nonaqueous electrolyte secondary battery that achieves high voltages and high cyclability with excellent safety. If a technique has been used to improve one device (providing a protective layer comprising magnesium oxide on a positive active material layer comprising  $\text{LiCoO}_2$  in Inoue), and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way (providing a protective layer comprising magnesium oxide on the positive active material layer comprising  $\text{LiCoO}_2$  in Watanabe), using the technique is obvious unless its actual application is beyond his or her skill. See MPEP 2141 (III) Rationale C, KSR v. Teleflex (Supreme Court 2007).

It would have also been obvious to one having ordinary skill in the art to form the positive active material of Watanabe as modified by Inoue such that the "existence ratio" of zirconium and magnesium respectively on the surface of the lithium-transition metal oxide is greater than 20% in order to reduce the friction force among the active materials thereby increasing the flowability of the active material so that the positive electrode film has a higher density thus increasing the charge/discharge characteristics of the battery and also increasing the capacity of the battery. It further would have been obvious to optimize the "existence ratio" of zirconium and magnesium respectively on the surface of the lithium-transition metal oxide of Watanabe as modified by Inoue since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art, in the absence of unexpected results. In re Boesch, 617 E.2d 272, 205 USPQ 215 (CCPA 1980). Therefore the burden is shifted to applicants to prove in the form of evidence that the invention of Watanabe as modified by Inoue does not exhibit the same existence ratios as the instantly claimed invention.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT HODGE whose telephone number is (571)272-2097. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/R. H./  
Examiner, Art Unit 1795

/PATRICK RYAN/  
Supervisory Patent Examiner, Art Unit 1795